

REMARKS

The Examiner continues to reject claims 1, 3, 5, 6, 11, 14, 17, 18, 20 and 23 under 35 U.S.C. § 102(b) in view of Miyazaki, claims 4, 8, 15, 16, 21 and 22 under 35 U.S.C. § 103(a) in view of Miyazaki and Hirakata, and claims 9 and 10 under 35 U.S.C. § 103(a) in view of Miyazaki and Tani. Also, the Examiner has withdrawn the previously allowable status of claims 12 and 13 and now rejects claims 12, 13, 26 and 27 under 35 U.S.C. § 103(a) in view of Miyazaki and U.S. Patent No. 5,995,188 to Shimizu. Further, the Examiner has rejected claim 24 under 35 U.S.C. § 103(a) in view of Miyazaki and JP 05-127172 to Mihara (cited in IDS), and claim 25 under 35 U.S.C. § 103(a) in view of Miyazaki and U.S. Patent No. 3,919,452 to Ettre et al.

I. Rejections under 35 U.S.C. § 102(b) in view of Miyazaki

The Examiner has rejected claims 1, 3, 5, 6, 11, 14, 17, 18, 20 and 23 under 35 U.S.C. § 102(b) in view of Miyazaki.

A. Claim 1

By this Amendment, Applicant has incorporated the features of claims 24 and 25 into claim 1. Accordingly, claim 1 recites a first conductive column comprising a ground column made of an elastic resin and a first electrode which covers the ground column. Further, the first conductive column is surrounded by the seal, and the seal shrinks when a sealing material is set.

In regard to the claimed first conductive column, the Examiner refers to Figure 9 of Miyazaki. Figure 9 of Miyazaki discloses a seal 37 that contacts a conductive column 38.

However, even if the seal 37 acts to keep the spacing between the conductive column 38 and the electrode 24 constant, the structure as shown does not ensure that the conductive column 38 and the electrode 24 are securely connected. Similarly, the combination of the conductive column 13 of Mihara, which is made of Ag paste, and the seal 11, does not provide proper and stable electric connection between substrates (where claim 24 was rejected in view of Miyazaki and Mihara).

On the other hand, the present invention enables the improvement in electrical connection between the conductive column and the electrodes. Specifically, the connection between a conductive column and electrodes tends to be unstable because they are not connected with adhesives. However, in the present invention, “the first conductive column comprises a ground column made of an elastic resin.” Since the seal shrinks when a sealing material is set (previously recited in claim 25) and the first conductive column is surrounded by the seal (previously recited in claim 24), the first conductive column is compressed because of the shrinkage of the seal, and a stable electric connection is established with the electrodes. If the seal does not shrink when a sealing material is set, compression force will not be properly applied to the first conductive column. Further, if the first conductive column is not surrounded by the seal, the first conductive column will not be uniformly and securely compressed. Finally, if the first conductive column does not comprise a ground column made of an elastic resin, the first conductive column cannot accommodate the shrinkage of the seal.

In view of the above, Applicant submits that the combination of the three features cited above for claim 1 achieve a stable electric connection between electrodes. Due to the respective

teachings of Miyazaki, Mihara (cited for claim 24) and Ettre (cited for claim 25), Applicant submits that one skilled in the art would not be motivated to combine the references in the manner as claimed. However, even if Applicant assumes *arguendo* that the references are combinable, Applicant submits that the alleged combination would fail to produce the claimed invention for the reasons set forth above.

B. Claims 3, 5, 6, 11, 14

Applicant submits that claims 3, 5, 6, 11 and 14 are patentable at least by virtue of their dependency upon claim 1.

C. Claims 17 and 18

Applicant submits that claims 17 and 18 are patentable for at least analogous reasons as claim 1.

D. Claims 20 and 23

Applicant submits that claims 20 and 23 are patentable at least by virtue of the dependency upon claim 18.

II. Rejections under 35 U.S.C. § 103(a) in view of Miyazaki and Hirakata

The Examiner has rejected claims 4, 8, 15, 16, 21 and 22 under 35 U.S.C. § 103(a) in view of Miyazaki and Hirakata. However, since claims 4, 8, 15, 16, 21 and 22 are dependent

upon one of claims 1 or 18, and Hirakata fails to cure the deficient teachings of Miyazaki, Mihara and Ettre, in regard to claims 1 and 8, Applicant submits that claims 4, 8, 15, 16, 21 and 22 are patentable at least by virtue of their dependency.

III. Rejections under 35 U.S.C. § 103(a) in view of Miyazaki and Tani

The Examiner has rejected claims 9 and 10 under 35 U.S.C. § 103(a) in view of Miyazaki and Tani. However, since claims 9 and 10 are dependent upon claim 1, and Tani fails to cure the deficient teachings of Miyazaki, Mihara and Ettre, in regard to claim 1, Applicant submits that claims 9 and 10 are patentable at least by virtue of their dependency.

IV. Rejection under 35 U.S.C. § 103(a) in view of Miyazaki and Shimizu

The Examiner has rejected claims 12, 13, 26 and 27 under 35 U.S.C. § 103(a) in view of Miyazaki and U.S. Patent No. 5,995,188 to Shimizu. However, since claims 12, 13, 26 and 27 are dependent upon one of claims 1, 17 or 18, and Shimizu fails to cure the deficient teachings of Miyazaki, Mihara and Ettre, in regard to claims 1, 17 and 18, Applicant submits that claims 12, 13, 26 and 27 are patentable at least by virtue of their dependency.

V. Rejections under 35 U.S.C. § 103(a) in view of Miyazaki and Mihara

The Examiner has rejected claim 24 under 35 U.S.C. § 103(a) in view of Miyazaki and JP 05-127172 to Mihara. However, since claim 24 has been canceled, without prejudice or disclaimer, and incorporated into claim 1, Applicant refers the Examiner to the comments presented above.

VI. Rejections under 35 U.S.C. § 103(a) in view of Miyazaki and Ettre

The Examiner has rejected claim 25 under 35 U.S.C. § 103(a) in view of Miyazaki and U.S. Patent No. 3,919,452 to Ettre et al. However, since claim 25 has been canceled, without prejudice or disclaimer, and incorporated into claim 1, Applicant refers the Examiner to the comments presented above.

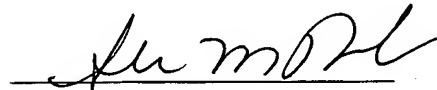
VII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Amendment under 37 C.F.R. § 1.116
U.S. Application No. 10/777,705

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Allison M. Tulino
Registration No. 48,294

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: July 10, 2006